DOCUMENT RESUME

ED 141 617 08 CE 011 883

TITLE	Management Information System for Vocational Education. MISVE Document Catalog. Research and Development Series No. 127A.
INSTITUTION	Ohio State Univ., Columbus. Center for Vocational Education.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.; Office of Education (DHEW), Washington, D.C.
PUB DATE	77
CONTRACT	NE-C-00-3-0078; OE-C-300-75-0184
NOTE	31p.; For related documents see CE 011 883-888
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	Administrative Agencies; *Catalogs; Computer Oriented Programs; *Management Information Systems; Program Planning; Resource Guides; *Vocational Education

ABSTRACT

This catalog contains an overview and a table of contents (where applicable) for each of five documents designed for use with MISVE--Management Information System for Vocational Education. (MISVE was designed to provide users with an advanced management information system (MIS) capability that could effectively respond to current information needs of vocational education managers, to their new and emerging data needs, as well as permit adaptability in meeting the unique operational requirements.) Each document overview included in this catalog also covers the purposes for the specific document and the audience(s) to whom it is directed. This catalog and the five related documents described are intended for potential system users to guide them in assessing the value of MISVE for their needs and to provide information needed by them to adapt and install MISVE. (Documents are titled "MISVE Executive Summary," "MISVE General Description," "MISVE Administrators' Orientation," "MISVE Technical Description," and "MISVE Source Data Input Procedures.") (SH)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

RESEARCH AND DEVELOPMENT SERIES NO. 127A

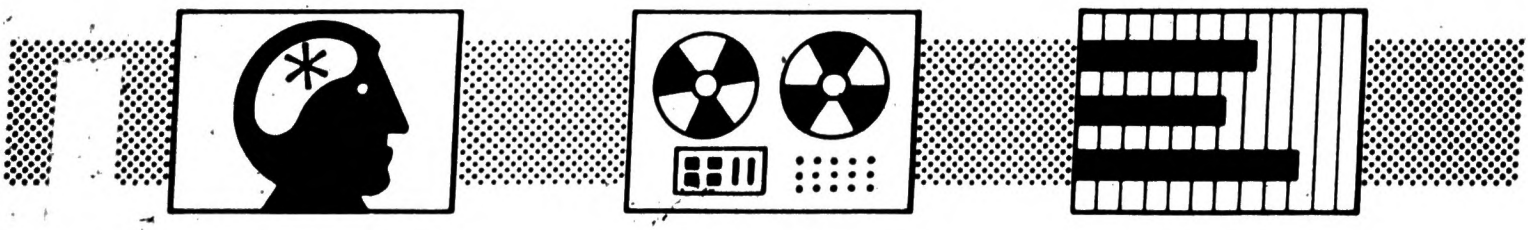
ED141617

MANAGEMENT INFORMATION SYSTEM FOR VOCATIONAL EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

MISVE DOCUMENT CATALOG



CE 011 883

THE CENTER FOR VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 Kenny Road Columbus, Ohio 43210

THE CENTER MISSION STATEMENT

The Center for Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

MISVE DOCUMENT CATALOGUE

The Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

1977

A Final Report
On A Project Conducted Under
Contract No. NE-C-00-3-0078
and
Contract No. OE-C-300-75-0184

The material in this publication was prepared pursuant to contracts with the National Institute of Education and the U.S. Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official National Institute of Education or U.S. Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

FOREWORD

Vocational education agencies require management information systems that will assist them in their program planning, evaluation, monitoring and reporting responsibilities. The Management Information System for Vocational Education (MISVE) was designed to provide users with an advanced MIS capability that can effectively respond to current information needs of vocational education managers, as well as to their new and emerging data needs. The system has been planned to permit great adaptability in meeting the unique operational requirements of its users.

Invaluable cooperation and assistance in the development and field trial of MISVE was provided by Robert Stump, project officer, the National Institute of Education; Jack Wilson, project officer, the U.S. Office of Education, Bureau of Occupational and Adult Education, Division of Research and Demonstration; and to the staff of the Colorado State Board for Occupational Education who were involved in the MISVE field trial. Recognition is due also to the staff of MRI Systems Corporation who developed the MISVE applications programs and assisted in the preparation of MISVE documents, to the many state staff persons who served on MISVE applicability panels to review system developments and outputs, and to the many persons who provided reactions and valuable advice for revising the present set of MISVE documents. Significant contributions to the final product were also made by Harold Starr, project director; Michael Black and Kenney Gray, research specialists; and other Center staff.

Robert E. Taylor
Director

MISVE DOCUMENT CATALOGUE

OVERVIEW

MISVE DOCUMENT CATALOGUE

OVERVIEW

Five documents in addition to the Document Catalogue have been written for use with MISVE. These documents are provided to potential system users to guide them in assessing the value of MISVE for their needs and to provide information needed by them to adapt and install MISVE. These documents are titled:

- MISVE Executive Summary
- MISVE General Description
- MISVE Administrators' Orientation
- MISVE Technical Description
- MISVE Source Data Input Procedures

The "MISVE Document Catalogue" contains an overview and a table of contents (where applicable) for each of the MISVE documents listed above. Each overview describes the purposes for the document, the audience(s) to whom the document is directed, and a summary of its contents.

The current set of MISVE documents was produced within the time-frame and resources available for completing project objectives.

MISVE SUMMARY

OVERVIEW AND TABLE OF CONTENTS

MISVE EXECUTIVE SUMMARY

OVERVIEW

1. PURPOSES, AUDIENCE, AND CONTENT

This document has been written for the general audience concerned with management information systems for use by vocational education agencies. The purposes of this document are to provide the reader with a capsule summary of the major purposes and features of MISVE, what it can accomplish, and estimated system costs.

2. TABLE OF CONTENTS

Because of the brevity of this document there is no table of contents.

MISVE GENERAL DESCRIPTION

OVERVIEW AND TABLE OF CONTENTS

MISVE GENERAL DESCRIPTION

OVERVIEW

1. PURPOSES AND AUDIENCE

This document has been written for senior management and technical staff. These persons are provided with a description of MISVE's purposes and features, how this system differs from other vocational education management information systems, how MISVE operates, and what it can accomplish. The document is written in a basically non-technical style and contains a more comprehensive description of the system than is found in the "MISVE Executive Summary". The purposes of the "MISVE General Description" is to provide those persons who administer, manage, or support MISVE operations with a basic understanding of the product package.

2. CONTENT

The "MISVE General Description" contains the design rationale, advantages, and features of MISVE. System components are described and background information is provided about the development of the information and computer software subsystems.

TABLE OF CONTENTS

	Page
MISVE SYSTEM DESCRIPTION	1
1. SYSTEM ADVANTAGES	1
2. DESIGN RATIONALE	2
2.1 MISVE Functional Needs Framework	5
3. SYSTEM FEATURES	8
3.1 The Prototype Data Base	8
3.1.1 development of the prototype data base	10
3.2 The MISVE Prototype Data Collection Instruments	12
3.3 The Generalized Data Base Management System Used With MISVE	13
3.3.1 operating configurations	13
3.3.2 development of computer software support for MISVE	14
3.4 MISVE Data Base Definition and Structure	16
3.5 Applications Programs for Use with MISVE	18
3.6 MISVE Documentation	18

LIST OF FIGURES

Page

FIGURES

1 MISVE FUNCTIONAL NEEDS LEVELS 6

2 COMBINING DATA BASE ELEMENTS 9

MISVE ADMINISTRATORS' ORIENTATION

OVERVIEW AND TABLE OF CONTENTS

MISVE ADMINISTRATORS' ORIENTATION

OVERVIEW

1. PURPOSES AND AUDIENCE

This document has been written for those administrators and information system managers who are responsible for the planning that is needed prior to an implementation of MISVE. The purpose of this document is to provide administrators and managers with information needed by them to estimate resource requirements for implementing MISVE in their state, plan for selecting and implementing generalized computer software, plan for adapting the prototype product package, and plan for information flow. The "MISVE General Description" is a prerequisite publication.

2. CONTENT

Section I is concerned with planning concerns that need to be considered by MISVE management and staff responsible for system operations. These concerns include orienting data suppliers and consumers to MISVE, planning for information flow, and planning for staff training. Section II details the resources required to install and operate MISVE.

TABLE OF CONTENTS

	Page
PLANNING FOR MANAGING MISVE, SECTION I	I-1
1. PRE-PLANNING CONCERNS	I-1
2. DEFINING THE FUNCTIONS OF MISVE PERSONNEL	I-2
2.1 Service Functions	I-2
2.2 Orienting State and Local Staff	I-2
2.2.1 orienting state staff	I-3
2.2.2 orienting local school district staff	I-3
3. ORGANIZING AN INFORMATION FLOW NETWORK	I-4
3.1 Information Flow Concerns	I-5
3.1.1 selecting an appropriate sample (Activity 1)	I-5
3.1.2 planning for distributing and collecting data (Activity 2)	I-8
4. PLANNING FOR STAFF TRAINING	I-9
4.1 EDP Staff Training	I-10
4.2 Vocational Education Staff Training	I-12
RESOURCES NEEDED TO INSTALL AND OPERATE MISVE, SECTION II	II-1
1. RESOURCES TO INSTALL MISVE	II-1
1.1 Acquiring Technical Services from CVE	II-2
1.1.1 staffing for installing MISVE	II-2
1.1.2 costs to acquire SYSTEM 2000 or an alternate GDBMS with generally similar capabilities	II-3

Page

1.1.3 costs associated with training staff in the use of the GDBMS . . . II-5

1.1.4 costs associated with GDBMS installation II-6

1.1.5 costs for setting up MISVE/GDBMS support programs II-6

1.2 Planning for Resources to Operate MISVE . II-6

1.2.1 data instrument preparation, data collection, and funds required for conversion of source data to machine readable format II-7

1.2.2 costs for computer time and computer center services II-8

1.3 Summary of Costs to Operate MISVE II-10

2. PLANNING FOR SELECTING AND IMPLEMENTING A GDBMS FOR USE WITH MISVE II-13

LIST OF FIGURES AND TABLES

Page

FIGURE

1 INFORMATION FLOW . . . . . I-6&7

TABLES

1 YEARLY COSTS TO OPERATE MISVE II-11

2 YEARLY PER STUDENT COST TO OPERATE MISVE II-12

MISVE TECHNICAL DESCRIPTION

OVERVIEW AND TABLE OF CONTENTS

MISVE TECHNICAL DESCRIPTION

OVERVIEW

1. PURPOSES AND AUDIENCE

This document has been written for the MISVE manager(s) and electronic data processing operations staff who will be responsible for the implementation and maintenance of the MISVE on the computer. The major purposes of this document are: a) to describe the computer hardware/software resources required to implement and operate SYSTEM 2000, the generalized data base management system (GDBMS) used with MISVE; b) to present a technical description of the MISVE software support; and, c) to present a technical description of the prototype MISVE data base, its structure, and MISVE reporting procedures. This technical description is provided, in part, to better enable EDP operations staff to communicate with MISVE management staff regarding the impact of changes in the prototype data base and reporting procedures.

The "MISVE General Description" is a prerequisite publication.

2. CONTENT

The "MISVE Technical Description" is divided into four sections. Section I details computer hardware/operating systems requirements, the programming and operations support, and the training required by EDP technical staff to implement and maintain the MISVE computer software. Section II provides the reader with an understanding of relationships between the MISVE information and computer software subsystems. Section III provides a description of the computer processes that comprise the MISVE computer software support subsystem. Section IV provides the technical EDP staff with documentation required to understand the computer programs involved in the loading and maintenance of the MISVE data base.

TABLE OF CONTENTS

	Page
EDP ENVIRONMENTS AND REQUIREMENTS, SECTION I	I-1
1. RESOURCE REQUIREMENTS	I-1
1.1 Computer Hardware/Operating Systems	I-1
1.1.1 service bureau environment	I-2
1.2 Programming Support	I-2
1.2.1 applications programming	I-3
1.2.2 systems programming	I-3
1.2.3 data base administration	I-4
1.3 Operations Support	I-5
2. SUMMARY	I-5
INFORMATION SUBSYSTEM - COMPUTER SOFTWARE RELATIONSHIPS, SECTION II	II-1
1. SYSTEM 2000 TERMINOLOGY	II-1
2. DATA BASE OVERVIEW	II-4
2.1 Catagories of Data	II-4
2.1.1 staff data	II-5
2.1.2 program data	II-5
2.1.3 materials and equipment data	II-6
2.1.4 facilities data	II-6
2.1.5 financial data	II-7
2.1.6 manpower data	II-7
2.1.7 translation tables data	II-7
2.2 Relationships of Data	II-8

Page

2.3 Complete Structure II-8

2.4 Cross Referencing II-9

3. SOURCE DATA INSTRUMENTS OVERVIEW II-10

4. REPORTS OVERVIEW II-10

4.1 Ad Hoc Reports II-11

4.1.1 user options II-12

4.1.1.1 print command II-12

4.1.1.2 list command II-12

4.1.1.3 tally command II-12

4.1.1.4 string command II-13

4.1.1.5 report writer II-13

4.1.2 ad hoc reporting summary II-13

COMPUTER SOFTWARE SUPPORT, SECTION III III-1

1. SOFTWARE SYSTEM OVERVIEW III-1

2. INITIAL START-UP III-2

2.1 System Installation III-2

2.2 Data Base Definition III-2

2.3 Initial Load III-3

3. CYCLICAL PROCESSING III-3

3.1 Annual Processing III-4

3.2 Computer Programs III-4

DOCUMENTATION FOR THE DATA BASE MAINTENANCE AND LOAD PROGRAMS, SECTION IV IV-1

1. EDIT IV-1

Page

1.1 Flow Diagram IV-1

1.2 Layouts IV-1

1.2.1 files IV-1

1.2.1.1 input IV-1

1.2.1.2 output IV-1

1.2.1.3 report IV-1

1.3 Control Information IV-3

1.3.1 control switches IV-3

1.4 Logic Flow Diagram IV-3

1.5 Processing IV-3

1.5.1 program features IV-3

1.5.2 execution IV-3

1.5.3 end-of-job process IV-3

1.5.3.1 restart IV-3

1.5.3.2 report IV-3

2. SORTKEY IV-6

2.1 Flow Diagram IV-6

2.2 Layouts IV-6

2.2.1 files IV-6

2.2.1.1 input IV-6

2.2.1.2 output IV-6

2.2.1.3 report IV-6

2.3 Control Information IV-6

2.3.1 control switches IV-6

2.4 Logic Flow Diagram IV-6

Page

2.5 Processing IV-9

2.5.1 program features IV-9

2.5.2 execution IV-9

2.5.3 end-of-the-job process IV-9

2.5.3.1 restart IV-9

2.5.3.2 report IV-9

3. LOAD IV-10

3.1 Flow Diagram IV-10

3.2 Layouts IV-10

3.2.1 files IV-10

3.2.1.1 input IV-10

3.2.1.2 output IV-10

3.2.1.3 report IV-10

3.3 Control Switches IV-10

3.4 Logic Flow Diagram IV-10

3.5 Processing IV-10

3.5.1 program features IV-10

3.5.2 program execution IV-10

3.5.3 end-of-job process IV-13

3.5.3.1 restart IV-13

4. TABLOAD IV-14

4.1 Flow Diagram IV-14

4.2 Layouts IV-14

4.2.1 files IV-14

4.2.1.1 input IV-14

Page

4.2.1.2 output IV-14

4.2.1.3 report IV-14

4.3 Control Information IV-14

4.3.1 control switches IV-14

4.4 Logic Flow Diagram IV-14

4.5 Processing IV-14

4.5.1 program features IV-14

4.5.2 program execution IV-14

4.5.3 end-of-job process IV-18

4.5.3.1 restart IV-18

5. UPSTAFF (Staff Update) IV-19

5.1 Flow Diagram IV-19

5.2 Layouts IV-19

5.2.1 files IV-19

5.2.1.1 input IV-19

5.2.1.2 reports IV-19

5.3 Control Information IV-19

5.3.1 control switches IV-19

5.4 Logic Flow Diagram IV-19

5.5 Processing IV-19

5.5.1 special processing conditions . . . IV-22

5.5.2 special program messages IV-22

5.5.3 end-of-job process IV-22

5.5.3.1 restart IV-22

5.5.3.2 report IV-23

Page

6. UPSTUD (Student/Programs Update) IV-24

6.1 Flow Diagram IV-24

6.2 Layouts IV-24

6.2.1 files IV-24

6.2.1.1 input IV-24

6.2.1.2 reports IV-24

6.3 Control Information IV-24

6.3.1 control switches IV-24

6.4 Logic Flow Diagram IV-24

6.5 Processing IV-24

6.5.1 switch usage IV-24

6.5.2 repeating groups IV-27

6.5.3 end-of-job process IV-28

6.5.3.1 restart IV-28

6.5.3.2 report IV-28

APPENDICES

A SYSTEM 2000 DESCRIPTION A-1

B AN EVALUATION OF DATA BASE MANAGEMENT SYSTEMS B-1

C MISVE DATA BASE TREE STRUCTURE BROKEN INTO UNITS C-1

D MISVE DATA BASE DEFINITION D-1

E BREAKDOWN OF MISVE DATA BASE E-1

F SAMPLE AD HOC REPORTING COMMANDS F-1

G MISVE SYSTEM FLOW G-1

MISVE SOURCE DATA INPUT PROCEDURES

OVERVIEW AND TABLE OF CONTENTS

MISVE SOURCE DATA INPUT PROCEDURES

OVERVIEW

1. PURPOSES AND AUDIENCE

This document has been written as a reference manual for MISVE data input clerks and technical support personnel. It includes coding instructions, scheduling, keypunch instructions, and card layout formats for the MISVE prototype source data instruments. The "MISVE Source Data Input Procedures" document also provides information needed by MISVE technical support staff to modify and revise input procedures to reflect local changes in source data instrument format, content, and specifications. The "MISVE Source Data Input Procedures" document is written as a stand-alone document; however, MISVE technical supports should consider the "MISVE General Description" and the "MISVE Technical Description" documents as prerequisites to obtain an understanding of the design of the "MISVE Source Data Input Procedures" document.

2. CONTENT

The "MISVE Source Data Input Procedures" document is divided into four sections. The first section provides a brief overview of the organization and content of the prototype source data instruments. Section II details the coding schemes which are used with the source data instruments. Sections III and IV detail the keypunch instructions, card layout formats, and field instructions for each source data instrument and for cross reference tables. The Appendices include cross references between source data instruments and data fields.

TABLE OF CONTENTS

Page

MISVE SOURCE DATA INPUT PROCEDURES OVERVIEW, SECTION I I-1

1. INSTRUMENT OVERVIEW I-1

2. SOURCE DATA INSTRUMENT CONTENT I-3

MISVE CODING SCHEMES, SECTION II II-1

1. SDI IDENTIFICATION CODE II-2

2. DISTRICT CODE II-3

3. PROGRAM CODE II-4

4. PROGRAM APPROVAL NUMBER II-5

KEYPUNCH INSTRUCTIONS AND CARD LAYOUT FORMATS FOR SOURCE DATA INSTRUMENTS, SECTION III . . . . . UNNUMBERED

KEYPUNCH INSTRUCTIONS AND CARD LAYOUT FORMATS FOR EXTERNAL CROSS REFERENCE DATA, SECTION IV . . . . . UNNUMBERED

APPENDICES

A MISVE SOURCE DATA INSTRUMENT FIELD TO DATA BASE FIELD CROSS REFERENCE A-1

B MISVE DATA BASE FIELD TO SOURCE DATA INSTRUMENT FIELD CROSS REFERENCE B-1

LIST OF FIGURES

Page

FIGURES

1 FOUR CODING SCHEMES II-1

2 THE CODING FORMAT FOR THE SDI IDENTIFICATION CODE II-2

3 THE CODING FORMAT FOR THE DISTRICT CODE II-3

4 THE CODING FORMAT FOR THE PROGRAM CODE II-4

5 THE CODING FORMAT FOR THE PROGRAM APPROVAL NEEDS II-5